

=> fil hcap

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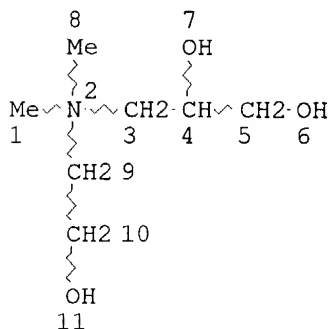
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FILE COVERS 1907 - 23 Sep 2004 VOL 141 ISS 13  
FILE LAST UPDATED: 22 Sep 2004 (20040922/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 14

L1 STR



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE  
L3 2 SEA FILE=REGISTRY SSS FUL L1  
L4 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L3

=> fil uspatful

FILE 'USPATFULL' ENTERED AT 15:01:03 ON 23 SEP 2004  
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 23 Sep 2004 (20040923/PD)  
 FILE LAST UPDATED: 23 Sep 2004 (20040923/ED)  
 HIGHEST GRANTED PATENT NUMBER: US6795973  
 HIGHEST APPLICATION PUBLICATION NUMBER: US2004187181  
 CA INDEXING IS CURRENT THROUGH 23 Sep 2004 (20040923/UPCA)  
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 23 Sep 2004 (20040923/PD)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2004  
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2004

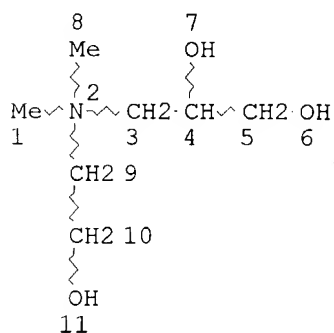
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>>> USPAT2 is now available.  USPATFULL contains full text of the  <<<
>>> original, i.e., the earliest published granted patents or  <<<
>>> applications.  USPAT2 contains full text of the latest US  <<<
>>> publications, starting in 2001, for the inventions covered in  <<<
>>> USPATFULL.  A USPATFULL record contains not only the original  <<<
>>> published document but also a list of any subsequent  <<<
>>> publications.  The publication number, patent kind code, and  <<<
>>> publication date for all the US publications for an invention  <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL  <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc.  <<<

>>> USPATFULL and USPAT2 can be accessed and searched together  <<<
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>>> enter this cluster.  <<<
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>>> classifications, or claims, that may potentially change from  <<<
>>> the earliest to the latest publication.  <<<
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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 19

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L3 2 SEA FILE=REGISTRY SSS FUL L1

L9 1 SEA L3

=&gt; dup rem l4 l9

FILE 'HCAPLUS' ENTERED AT 15:01:17 ON 23 SEP 2004

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FILE 'USPATFULL' ENTERED AT 15:01:17 ON 23 SEP 2004

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PROCESSING COMPLETED FOR L4

PROCESSING COMPLETED FOR L9

L10 5 DUP REM L4 L9 (0 DUPLICATES REMOVED)

ANSWERS '1-4' FROM FILE HCAPLUS

ANSWER '5' FROM FILE USPATFULL

=&gt; d l10 ibib abs hitstr 1-5

L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:98703 HCAPLUS

DOCUMENT NUMBER: 132:153667

TITLE: Preparation of cationic surfactants containing ester group and having good water solubility

INVENTOR(S): Kim, Dong-Il; Kim, Tae-Seong; Rang, Moon-Jeong

PATENT ASSIGNEE(S): LG Chemical Ltd., S. Korea

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

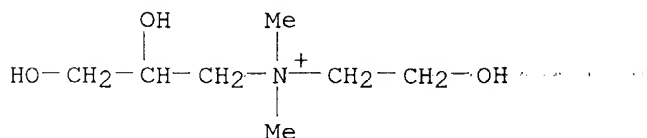
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000006679	A1	20000210	WO 1999-KR407	19990727
W: CN, ID, IN, JP, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
KR 2000011984	A	20000225	KR 1999-30497	19990727
JP 2002521492	T2	20020716	JP 2000-562463	19990727
US 6414170	B1	20020702	US 2001-744349	20010123
PRIORITY APPLN. INFO.:			KR 1998-30208	A 19980727
			WO 1999-KR407	W 19990727

OTHER SOURCE(S): MARPAT 132:153667

AB A cationic surfactant having excellent softness, antistatic properties, biodegradability, etc. is due to having an ester group and a hydrophilic hydroxyl group. A cationic surfactant is prepared by reacting tertiary amine derivs., fatty acid, and epihalohydrin, and prepared simply by reacting esterification and quaternary reactions in one step with a high yield. The cationic surfactant is a high grade alkyl quaternary ammonium compound  $[A(CH_2)_nN+(R_1)_2CH_2CH(OH)CH_2O_2CR_2]X^-$  where  $R_1 = C1-4$ -alkyl;  $R_2 = C7-21$  linear or branched alkyl or alkenyl group;  $A = OCOR_3$ ,  $NHCOR_3$  or  $OH$ ;  $R_3 = C7-21$  linear or branched alkyl or alkenyl group;  $X =$  halogen; and  $n = 2-6$ .

IT 110528-96-6DP, esters with mixts. of stearic acid and palmitic acid  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(surfactant, biodegradability; cationic surfactants containing hydroxyl and ester group)  
RN 110528-96-6 HCAPLUS  
CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride  
(9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:8680 HCAPLUS

DOCUMENT NUMBER: 112:8680

TITLE: High-yield azo dye compositions for natural and synthetic polyamide textiles

INVENTOR(S): Ruzicka, Karel; Maxa, Milan; Suk, Jiri

PATENT ASSIGNEE(S): Czech.

SOURCE: Czech., 3 pp.

CODEN: CZXXA9

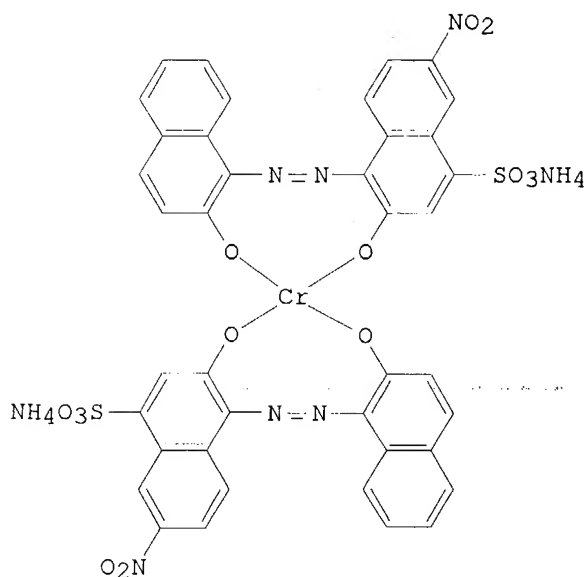
DOCUMENT TYPE: Patent

LANGUAGE: Czech

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 255187	B1	19880215	CS 1986-3779	19861208
PRIORITY APPLN. INFO.:			CS 1986-3779	19861208
GI				



AB The title composition, useful for dyeing and printing of wool, silk, and polyamide textiles with a high dyeing yield, consists of the 1:2 Cr-complex dye I 65-75, cationic surfactant [ROCH<sub>2</sub>CH(OH)CH<sub>2</sub>NMe<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH]+X- (II), (R = C<sub>10</sub>-18 alkyl; X = halogen) 1-3, and fillers (inorg. electrolytes, sugars, urea, oils as antidusting agents) 22-34%. These compns. reduce the concentration of I in waste waters and are prepared by mixing of

the liquid components and spray or fluid drying. I (75 parts) was mixed at 60° with 7 parts of a 30% aqueous solution of II and 25 parts Na<sub>2</sub>SO<sub>4</sub> and spray dried at 90-200°, giving a composition for use in neutral baths containing (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>.

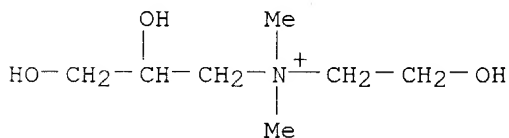
IT 121850-91-7D, C<sub>10</sub>-18 alkyl ethers, halide salts

RL: USES (Uses)

(surfactants, 1:2 chrome-complex azo dyeing compns. containing, for polyamide textiles)

RN 121850-91-7 HCAPLUS

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:479837 HCAPLUS

DOCUMENT NUMBER: 111:79837.

TITLE: Chrome-complex azo dye preparations

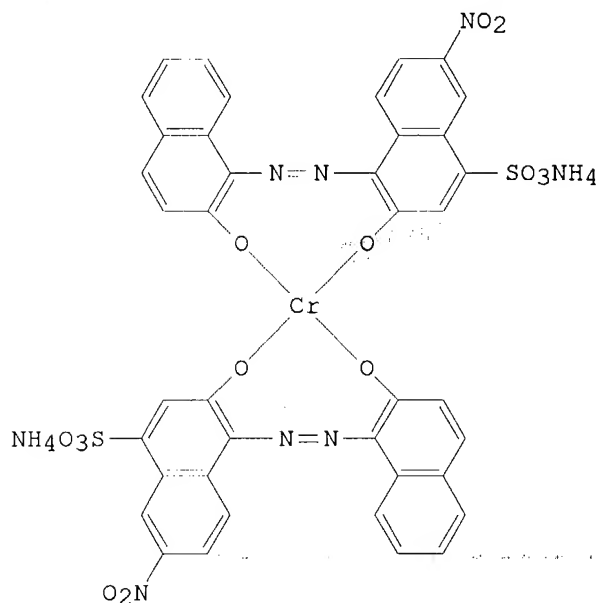
INVENTOR(S): Ruzicka, Karel; Maxa, Milan; Suk, Jiri

PATENT ASSIGNEE(S): Czech.

SOURCE: Czech., 3 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 254617	B1	19880115	CS 1986-3778	19860523
PRIORITY APPLN. INFO.:			CS 1986-3778	19860523
OTHER SOURCE(S):	MARPAT	111:79837		

GI

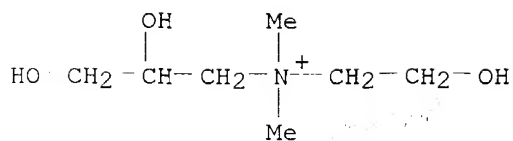


AB The title preps., containing the Cr complex dye I 65-75, cationizing agents [ROCH<sub>2</sub>CH(OH)CH<sub>2</sub>N(Me)<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH]+ X<sup>-</sup> (II) (R = C<sub>10</sub>-18 alkyl; X = halogen) 1-3, and fillers (inorg. electrolytes, sugars, urea, oily antidusting additives) 22-34%, give fast black prints and shades on wool, silk, and polyamide textiles with high I utilization. A typical preparation contains I 70, II 3, and Na<sub>2</sub>SO<sub>4</sub> 27 parts.

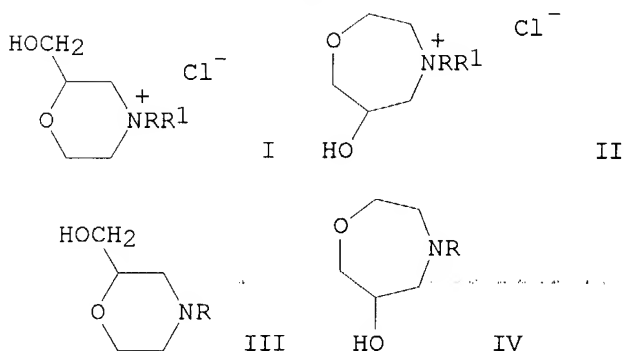
IT **121850-91-7D**, C<sub>10</sub>-18 alkyl ethers  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in chrome dye preps. for textile printing)

RN 121850-91-7 HCAPLUS

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1987:636676 HCAPLUS  
 DOCUMENT NUMBER: 107:236676  
 TITLE: Intramolecular cyclization products from alkanolamines and epichlorohydrin  
 AUTHOR(S): Buriks, Rudy S.; Lovett, Eva G.  
 CORPORATE SOURCE: Petrolite Corp., St. Louis, MO, 63119, USA  
 SOURCE: Journal of Organic Chemistry (1987), 52(23), 5247-54 ..  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 107:236676  
 GI



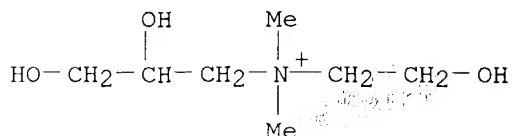
AB Tertiary (2-hydroxyethyl)dialkylamines  $\text{HOCH}_2\text{CH}_2\text{NRR}_1$  ( $\text{R}, \text{R}_1 = \text{Me}, \text{CH}_2\text{CH}_2\text{OH}$ ) reacted with epichlorohydrin to form mixts. containing equal amts. of 2-(hydroxymethyl)-4,4-dialkylmorpholinium chlorides I and perhydro-6-hydroxy-4,4-dialkyl-1,4-oxazepinium chlorides II. Secondary (2-hydroxyethyl)alkylamines  $\text{HOCH}_2\text{CH}_2\text{NHR}_3$  ( $\text{R}_3 = \text{Me}, \text{CH}_2\text{CH}_2\text{OH}$ ) gave a 9:1 ratio of the corresponding bases III and IV, resp., in agreement with the prediction of Baldwin's rules. Methylation of a mixture of III and IV ( $\text{R} = \text{Me}$  for both) with  $\text{MeCl}$  gave a mixture of I and II ( $\text{R} = \text{R}_1 = \text{Me}$ ). A mechanism involving intramol. ring closure of an intermediate epoxide is discussed.

IT 110528-96-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 110528-96-6 HCAPLUS

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride.  
 (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

L10 ANSWER 5 OF 5 USPATFULL on STN

ACCESSION NUMBER: 2002:160892 USPATFULL

TITLE: Preparation of cationic surfactants containing ester group in molecules

INVENTOR(S): Kim, Dong-Il, Daejeon, KOREA, REPUBLIC OF  
Ha, Jeong-Wook, Daejeon, KOREA, REPUBLIC OF  
Kim, Tae-Seong, Daejeon, KOREA, REPUBLIC OF  
Rang, Moon-Jeong, Daejeon, KOREA, REPUBLIC OF

PATENT ASSIGNEE(S): LG Chemical Ltd., Seoul, KOREA, REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6414170	B1	20020702
	WO 2000006679		20000210
APPLICATION INFO.:	US 2001-744349		20010123 (9)
	WO 1999-KR407		19990727
			20010123 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	KR 1998-30208	19980727
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Killos, Paul J.	
ASSISTANT EXAMINER:	Tucker, Zachary	
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	467	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for preparing a cationic surfactant in which physical chemical characteristics such as softness, antistatic properties, etc. as well as biodegradability are quite excellent due to having an ester group and a hydrophilic hydroxyl group in its molecules. A cationic surfactant of the present invention is prepared by reacting tertiary amine derivatives, fatty acid, and epihalohydrin, and prepared simply by reacting esterification and quaternary reactions in one step with a high yield. The above cationic surfactant is a high grade alkyl quaternary ammonium compound as represented in General Formula (1), wherein R<sup>sup.1</sup> is a C<sub>sub.1</sub>-C<sub>sub.4</sub> alkyl group; R<sup>sup.2</sup> is a C<sub>sub.7</sub>-C<sub>sub.21</sub> linear or branched alkyl or



alkenyl group; A is OCOR<sup>3</sup>, NHCOR<sup>3</sup> or OH; R<sup>3</sup> is a C<sup>7</sup>-C<sup>21</sup> linear or branched alkyl or alkenyl group; X is a halogen atom; and n is an integral number from 2 to 6. ##STR1##

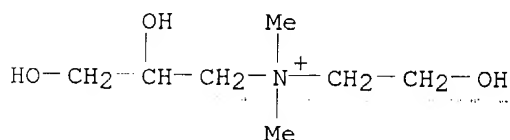
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 110528-96-6DP, esters with mixts. of stearic acid and palmitic acid

(surfactant, biodegradability; cationic surfactants containing hydroxyl and ester group)

RN 110528-96-6 USPATFULL

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>